

Paper reference 31760H
Pearson BTEC Level 3
Nationals Extended Certificate,
Foundation Diploma,
Diploma, Extended Diploma

Total Marks

Information Technology

UNIT 1: Information Technology

Systems

Time: 2 hours

In the boxes below, write your name, centre number and learner registration number.

Surname						
Other names						
Centre Number						
Learner Registration Number						

X67966A

YOU MUST HAVE

Nil.

YOU WILL BE GIVEN

Data Book.

INSTRUCTIONS

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this Question Paper or in the Data Book – there may be more space than you need.**

INFORMATION

- **The total mark for this paper is 90.**
- **The marks for EACH question are shown in brackets – use this as a guide as to how much time to spend on each question.**
- **There may be spare copies of some diagrams.**

Turn over

ADVICE

- **Read each question carefully before you start to answer it.**
 - **Try to answer every question.**
 - **Check your answers if you have time at the end.**
-

ANSWER ALL QUESTIONS.

WRITE YOUR ANSWERS IN THE SPACES PROVIDED.

1. David is a wedding photographer who takes and edits photographs.

He uses several portable devices including a digital camera, tablet, mobile phone and laptop.

David uses cloud storage for his photographs so that he can access his photographs anywhere with an internet connection.

- (a) Identify TWO OTHER reasons why David uses cloud storage for his photographs
(2 marks)

Answer space continues on the next page

REASON 1 _____

Turn over

Question 1 (a) continued

REASON 2 _____

(continued on the next page)

Question 1 continued

David is concerned that he will not be able to access his photographs if there is no internet connection.

- (b) Identify TWO OTHER concerns David may have about using cloud storage.
(2 marks)**

CONCERN 1 _____

CONCERN 2 _____

(continued on the next page)

Turn over

Question 1 continued

- (c) Look at the text message for Question 1 (c) in the separate Data Book.

David has received the text message that he believes is an attempt at SMS phishing.

- (i) Identify TWO reasons that may have led David to believe that this is a phishing text.
(2 marks)

REASON 1 _____

REASON 2 _____

(continued on the next page)

Turn over

Question 1 (c) continued

- (ii) Identify TWO ways that David can protect himself against phishing texts.
(2 marks)

WAY 1 _____

WAY 2 _____

(continued on the next page)

Turn over

Question 1 continued

(d) David wants to set up a blog to share his portfolio of wedding photographs.

(i) Describe the process David needs to follow for setting up the blog to share his portfolio of wedding photographs.

(4 marks)

Answer space continues on the next page

Turn over

Question 1 (d) (i) continued

(continued on the next page)

Question 1 (d) continued

- (ii) Explain TWO benefits to David of using a blog to show the wedding photographs.
(4 marks)**

Answer space continues on the next page

BENEFIT 1 _____

Question 1 (d) (ii) continued

BENEFIT 2 _____

(continued on the next page)

Question 1 continued

Using a blog is one way David can communicate and interact with online communities.

- (e) Discuss the features of other relevant platforms he could use to upload and show his wedding photographs.**
(8 marks)

Answer space continues on the next 2 pages

Turn over

Question 1 (e) continued

Question 1 (e) continued

(Total for Question 1 = 24 marks)

2. Jamal is the manager of a sports centre, which currently offers training facilities for a variety of sports.

Jamal wants to ensure that the centre is meeting the needs of the local community.

He has decided to gather the opinions of the local community by collecting data from individuals.

- (a) Explain TWO benefits of using primary data to gather the opinions of the local community.
(4 marks)

Answer space continues on the next page

BENEFIT 1 _____

Question 2 (a) continued

BENEFIT 2 _____

(continued on the next page)

Question 2 continued

- (b) Jamal has decided to collect some of the data using a questionnaire.

Look at **Figure 1** for Question 2 (b) in the separate Data Book.

Figure 1 shows part of the questionnaire.

The questionnaire includes multiple-choice and open response questions.

- (i) Give **TWO** reasons for using multiple – choice questions in a questionnaire.

(2 marks)

Answer space continues on the next page

REASON 1 _____

Question 2 (b) (i) continued

REASON 2 _____

(continued on the next page)

Question 2 (b) continued

**(ii) Describe how open question responses
are extracted to present findings.**

(2 marks)

(continued on the next page)

Question 2 continued

- (c) Jamal has decided to use online questionnaires rather than hard copies.

Explain TWO benefits to Jamal of gathering data using online questionnaires rather than hard copy questionnaires.

(4 marks)

Answer space continues on the next page

BENEFIT 1 _____

Question 2 (c) continued

BENEFIT 2

(continued on the next page)

Question 2 continued

- (d) Jamal uses questionnaires to collect data from the community.**

Explain ONE OTHER method that Jamal could use to collect data from the community.

(2 marks)

(continued on the next page)

Turn over

Question 2 continued

(e) Jamal needs to post his questionnaire online.

Discuss the factors, other than question types, that Jamal should consider when producing the user interface for his questionnaire.

(8 marks)

Answer space continues on the next 2 pages

Turn over

Question 2 (e) continued

[illegible]

Turn over

Question 2 (e) continued

(Total for Question 2 = 22 marks)

- 3. GFC designs and sells computing hardware and software via high street stores.**

The company holds stock in each store with additional stock held in a central warehouse.

In–store stock levels are recorded on a database on the in–store server.

Warehouse stock levels are recorded on a database on the company server.

A sales terminal is connected to the in–store local area network (LAN).

The in–store LAN uses the company virtual private network (VPN) to access the company server.

When an item is requested the in–store stock levels are checked.

If the item is not available in–store, stock is checked on the warehouse database.

The status of the stock is sent back to the sales terminal.

(continued on the next page)

Question 3 continued

- (a) On the blank space provided for Question 3 (a) in the separate Data Book, draw a diagram to show the integration of systems used in this process.**

The diagram should include:

- **devices, systems and connections that could be used**
- **the flow of data through the system**
- **annotations indicating data, devices, systems and connections.**

(6 marks)

(continued on the next page)

Question 3 continued

(b) GFC employs support staff who work remotely.

**The support staff use the company VPN
to access the company server.**

**Describe how the VPN works to enable the
support staff to send files to the company server.**

(4 marks)

Answer space continues on the next page

Turn over

Question 3 (b) continued

(continued on the next page)

Question 3 continued

- (c) Staff who work remotely must take steps to ensure the security of company data on their devices.**

One precaution is to install a firewall on the device.

Describe how a firewall ensures the security of data on a device.

(4 marks)

Answer space continues on the next page

Turn over

Question 3 (c) continued

(continued on the next page)

Question 3 continued

- (d) GFC keeps up to date with emerging technologies and wants to introduce robots in its warehouse.**

Discuss the implications for GFC of using robots in the warehouse.

(8 marks)

Answer space continues on the next 2 pages

Turn over

Question 3 (d) continued

[illegible]

Turn over

Question 3 (d) continued

This image shows a blank sheet of white paper with horizontal black ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

(Total for Question 3 = 22 marks)

- 4 LN – Educ is a UK charitable organisation providing teaching resources for schools. It wants to offer new online resources that include courses and teaching materials.**

LN – Educ’s website will provide access for students to use and interact with the new online resources.

The organisation is aware that security of data is important, but there are other implications to consider.

- (a) Discuss the impact and implications, other than security, that the organisation should consider so students can access and use the new online resources.**

(10 marks)

Answer space continues on the next 3 pages

Question 4 (a) continued

[illegible]

Turn over

Question 4 (a) continued

[illegible]

Turn over

Question 4 (a) continued

(continued on the next page)

Turn over

Question 4 continued

- (b) LN – Educ does not charge for the courses and is keen to attract students from overseas.

However, the organisation is aware that not all overseas students will be able to take advantage of the courses.

Analyse the moral and ethical factors that may restrict access to the courses, and the implications of this for overseas students.

You should consider:

- globalisation
- freedom of speech and censorship
- unequal access to information technology.

(12 marks)

Answer space continues on the next 4 pages

Turn over

Question 4 (b) continued

[illegible]

Question 4 (b) continued

Turn over

Question 4 (b) continued

[illegible]

Turn over

Question 4 (b) continued

(Total for Question 4 = 22 marks)

TOTAL FOR PAPER = 90 MARKS

END OF PAPER
